

# FCC Consumer Advisory

## DIGITAL TELEVISION TRANSITION

### Digital-To-Analog Converter Box - Selected Features

#### DTV Converter Box Features

The Federal Communications Commission has prepared this Consumer Advisory on selected features in 32 digital-to-analog converter boxes that it has purchased. Converter boxes are to be used with your analog television to receive digital signals broadcast for free over-the-air to your antenna. All the converter boxes listed here are certified under the National Telecommunications and Information Administration (NTIA) converter box coupon program and, therefore, are eligible for purchase using a coupon issued by the NTIA. Coupons are worth \$40, and are applied towards the purchase of converter boxes, which generally are priced at \$40 to \$80. Visit NTIA's website at [www.DTV2009.gov](http://www.DTV2009.gov) or call 1-888-388-2009 for more information on how to request up to two coupons per household.

These 32 converter boxes are currently available for retail purchase. The features described in this advisory include features of particular interest to the disabilities community, as recommended by the Commission's Consumer Advisory Committee.

The Advisory will be updated as more NTIA-approved boxes become available at retail stores and online.

**NOTE:** All coupon eligible boxes meet the minimum standards set by NTIA, the federal agency responsible for administering the converter box coupon program. See [www.ntia.doc.gov/ntiahome/frnotices/2007/DTVFinalRule\\_031207.htm](http://www.ntia.doc.gov/ntiahome/frnotices/2007/DTVFinalRule_031207.htm). NTIA's website lists a total of 139 coupon eligible converter boxes which have been approved for the coupon program ([www.DTV2009.gov](http://www.DTV2009.gov)).

*The FCC does not endorse any particular product or product manufacturer.*

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## **CLOSED CAPTION FEATURES**

Broadcasters can transmit closed captions in two formats. All captioned programs must include the basic analog-equivalent ("basic" or "608") captions. A DTV broadcaster may also include advanced digital ("advanced" or "708") captions, which can have additional features such as customizable fonts, colors, sizes and screen positions.

NTIA rules require all coupon eligible converter boxes ("CECBs") to convert the basic captions so that analog TVs can decode and display them. In this case the viewer would use the settings on their TV to turn on the captions.

Most CECBs also have the ability to decode the captions themselves, meaning that the viewer could use the settings on the converter box to turn on the captions. This way the viewer would be able to use the advanced features of 708 captions.

<b>Converter Box</b>	<b>Decode basic and advanced captions?*</b>	<b>Caption button on remote?</b>	<b>What does the caption button do?***</b>	<b>Retains caption settings when powered off?</b>
AccessHD DTA10101D	Basic/Adv	Yes	Sequential	Yes
Alpha Digita AT2016	Basic/Adv	Yes	Sequential	Yes
Apex DT 250	Basic/Adv	Yes	Sequential	Yes
Artec T3A	Basic/Adv	Yes	Sequential****	Yes
Artec T3AP Pro	Basic/Adv	Yes	Sequential****	Yes
Artec T3A Pro	Basic/Adv	Yes	Sequential****	Yes
Cadence DTVC-9	Basic/Adv	Yes	Sequential****	Yes
Channel Master CM-7000	Basic/Adv **	Yes	Sequential	Yes
Coship N9988T	Basic/Adv	Yes	Sequential****	Yes
Digital Stream DSP7500T	Basic/Adv **	Yes	Sequential	Yes
Digital Stream DSP7700T	Basic/Adv **	Yes	Sequential	Yes
Dish Networks DTV Pal	Adv	Yes	Toggle	Yes
GE 22729	Basic/Adv	Yes	Sequential	Yes
GE 22730	Basic/Adv	Yes	Sequential	Yes
Goodmind DTA 1000	Basic/Adv	Yes	Sequential	Yes
Insignia NS-DXA1	Basic/Adv	Yes	Sequential	Menu Only
Insignia NS-DXA1-APT	Basic/Adv	Yes	Sequential	Menu Only
Kingbox K8V1	Basic/Adv	Yes	Sequential	Yes
Lasonic LTA-260	Basic/Adv	Yes	Sequential	Yes
Magnavox TB100 MG9	Adv	No	N/A	Yes
Memorex MVCB1000	Basic/Adv	Yes	Toggle	Yes
MicroGem MG2000	Basic/Adv	Yes	Sequential	Yes
Philco TB1000HH9	Adv	No	N/A	Yes
RCA DTA800B1	Adv	Yes	Sequential	Yes
Sansonic FT-300A	Basic/Adv	Yes	Sequential	Yes
Tivax STB-T9	Basic/Adv	Yes	Sequential	Yes
Winegard RC-DT09	Basic/Adv	Yes	Sequential****	Yes
Winegard RC-DT09A	Basic/Adv	Yes	Sequential****	Yes
Zenith DTT901	Basic/Adv	Yes	Sequential	Menu Only



<b>Converter Box</b>	<b>Decode basic and advanced captions?*</b>	<b>Caption button on remote?</b>	<b>What does the caption button do?***</b>	<b>Retains caption settings when powered off?</b>
Zentech DF 2000	Basic/Adv	Yes	Sequential	Yes
Zinwell ZAT-970	Basic/Adv	Yes	Sequential	Yes
Zinwell ZAT-970A	Basic/Adv	Yes	Sequential	Yes

\*All boxes convert basic captions on the digital signal so that they can be viewed using the settings on an analog TV.

\*\*These boxes could decode only CC1 (captions in the primary language) and CC2 (data that augments information carried in the program) basic captions. The other boxes that decode basic captions also decode CC3 (alternative program-related caption data, typically captions in a second language) and CC4 (data that augments information carried in the program).

\*\*\***Menu** - The CC button brings up the captions menus on the converter box. **Sequential** - the CC button progresses through each of the caption options in sequence. **Toggle** - the CC button turns the captions either on or off. Caption preferences must first be configured through the captions menus on the converter box.

\*\*\*\*Sequential function cycles only through basic caption modes. Advanced captions can be accessed through menu only.

## **SECONDARY AUDIO PROGRAMMING FEATURES**

Some broadcasters send additional audio channels in foreign languages and/or with a voice-over describing the movements on screen for the vision impaired. Digital television allows up to 4 audio channels to be transmitted at a time. Some of the remote controls have a button allowing easy access to the SAP feature. This button may be labeled "audio" or "SAP."

<b>Converter Box</b>	<b>SAP (Channels)*</b>	<b>SAP button on remote?</b>
AccessHD DTA10101D	At least one	Yes
Alpha Digita AT2016	At least one	Yes
Apex DT 250	At least one	Yes
Artec T3A	At least one	Yes
Artec T3AP Pro	At least one	Yes
Artec T3A Pro	At least one	Yes
Cadence DTVC-9	At least one	Yes
Channel Master CM-7000	At least one	Yes
Coship N9988T	At least one	Yes
Digital Stream DSP7500T	At least one	Yes
Digital Stream DSP7700T	At least one	Yes
Dish Networks DTV Pal	One only	No
GE 22729	At least one	Yes
GE 22730	At least one	Yes
Goodmind DTA 1000	At least one	Yes
Insignia NS-DXA1	At least one	Yes
Insignia NS-DXA1-APT	At least one	Yes



Kingbox K8V1	At least one	Yes
Lasonic LTA-260	At least one	Yes
Magnavox TB100 MG9	At least one	Yes
Memorex MVCB1000	At least one	Yes
MicroGem MG2000	At least one	Yes
Philco TB1000HH9	At least one	Yes
RCA DTA800B1	One only	Yes
Sansonic FT-300A	At least one	Yes
Tivax STB-T9	At least one	Yes
Winegard RC-DT09	At least one	No
Winegard RC-DT09A	At least one	No
Zenith DTT901	At least one	Yes
Zentech DF 2000	At least one	Yes
Zinwell ZAT-970	At least one	Yes
Zinwell ZAT-970A	At least one	Yes

\*Refers to the number of additional audio channels that the box can access, if provided by the broadcaster.

## REMOTE CONTROL FEATURES

All coupon-eligible converter boxes have remote controls, though the features vary. Boxes that have universal remotes are able to control the power and/or volume for your television set. Some universal remotes may have the ability to control other devices such as your VCR or stereo amplifier.

Remote control buttons vary in size. Some consumers may find it more comfortable to use a remote control with larger buttons to make it easier to push one button. Other consumers may find it easier to use a remote control with smaller buttons because the overall size of the remote control is typically smaller and easier to hold.

Converter Box	Caption button on remote?	SAP button on remote?	Universal Remote?	Number Button Diameter (mm)
AccessHD DTA10101D	Yes	Yes	No	6
Alpha Digita AT2016	Yes	Yes	No	6
Apex DT 250	Yes	Yes	No	6
Artec T3A	Yes	Yes	No	6
Artec T3AP Pro	Yes	Yes	No	6
Artec T3A Pro	Yes	Yes	No	6
Cadence DTVC-9	Yes	Yes	No	6
Channel Master CM-7000	Yes	Yes	No	6
Coship N9988T	Yes	Yes	No	6
Digital Stream DSP7500T	Yes	Yes	Yes	6
Digital Stream DSP7700T	Yes	Yes	Yes	6
Dish Networks DTV Pal	Yes	No	No	6
GE 22729	Yes	Yes	No	6
GE 22730	Yes	Yes	No	6
Goodmind DTA 1000	Yes	Yes	No	7
Insignia NS-DXA1	Yes	Yes	No	7
Insignia NS-DXA1-APT	Yes	Yes	Yes	7



Converter Box	Caption button on remote?	SAP button on remote?	Universal Remote?	Number Button Diameter (mm)
Kingbox K8V1	Yes	Yes	Yes	6
Lasonic LTA-260	Yes	Yes	No	6
Magnavox TB100 MG9	No	Yes	No	7
Memorex MVCB1000	Yes	Yes	No	7
MicroGem MG2000	Yes	Yes	No	8-9
Philco TB1000HH9	No	Yes	No	7
RCA DTA800B1	Yes	No	Yes	9
Sansonic FT-300A	Yes	Yes	No	6
Tivax STB-T9	Yes	Yes	No	6
Winegard RC-DT09	Yes	No	No	6
Winegard RC-DT09A	Yes	No	No	6
Zenith DTT901	Yes	Yes	Yes	7
Zentech DF 2000	Yes	Yes	No	6
Zinwell ZAT-970	Yes	Yes	No	6
Zinwell ZAT-970A	Yes	Yes	No	6

## **ADDITIONAL/ADVANCED FEATURES**

- Adding Channels:** All coupon-eligible converter boxes have the ability to scan the airwaves for available channels, but not all boxes can add channels to your line-up without deleting channels. This may be important to you if you live between two cities and have to point your antenna in different directions to receive different stations. Some boxes can add channels through an update **scan**, which may take 5 or more minutes and will find new channels and add them to your lineup without deleting your existing lineup. A **"direct"** add allows you to add a channel to the lineup without scanning, but you must know the RF channel number, which is not always the same as the channel number used for marketing. **Some boxes have both an update scan and a direct add function.**
- Analog Pass-Through:** While all domestic full-power television stations will be discontinuing analog service on or before February 17, 2009, you may be able to receive some analog television after this date. Channels in Canada and Mexico will not transition to digital broadcasting on February 17. Additionally, most low-power, "Class A," and translator stations in the U.S. will continue to broadcast analog signals. A converter box with "analog pass-through" capability allows broadcast signals to pass through the converter box to be tuned by your analog TV without the need to use an "A/B switch" or a "signal splitter" and extra cable to route the analog signals around the converter box.

Converter Box	Adding Channels	Analog Pass-Through
AccessHD DTA10101D	None	No
Alpha Digita AT2016	Scan	No
Apex DT 250	None	Yes
Artec T3A	Scan/Direct	No
Artec T3AP Pro	Scan/Direct	Yes
Artec T3A Pro	Scan/Direct	No
Cadence DTVC-9	Scan/Direct	No



<b>Converter Box</b>	<b>Adding Channels</b>	<b>Analog Pass-Through</b>
Channel Master CM-7000	Scan	No
Coship N9988T	Scan/Direct	No
Digital Stream DSP7500T	Scan	No
Digital Stream DSP7700T	Scan	Yes
Dish Networks DTV Pal	Scan/Direct	Yes
GE 22729	Direct	No
GE 22730	Direct	No
Goodmind DTA 1000	Direct	No
Insignia NS-DXA1	Scan/Direct	No
Insignia NS-DXA1-APT	Scan/Direct	Yes
Kingbox K8V1	Scan/Direct	No
Lasonic LTA-260	None	No
Magnavox TB100 MG9	Direct	Yes
Memorex MVCB1000	Direct	Yes
MicroGem MG2000	Direct	No
Philco TB1000HH9	Direct	Yes
RCA DTA800B1	Scan	Yes
Sansonic FT-300A	None	No
Tivax STB-T9	Scan/Direct	No
Winegard RC-DT09	Scan/Direct	No
Winegard RC-DT09A	Scan/Direct	Yes
Zenith DTT901	Scan/Direct	Yes
Zentech DF 2000	Direct	No
Zinwell ZAT-970	Direct	No
Zinwell ZAT-970A	Direct	Yes

For more information or questions pertaining to the DTV transition, please e-mail [DTVinfo@fcc.gov](mailto:DTVinfo@fcc.gov) or visit the FCC's Web site at [www.DTV.gov](http://www.DTV.gov) or call toll-free at 1-888-CALL-FCC (voice) and 1-888-TELL-FCC (TTY)

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